

FINDING OF NO SIGNIFICANT IMPACT
for
Wildland Fire Training
at New Boston Air Force Station, New Hampshire

The U.S. Air Force (USAF) at New Boston Air Station (NBAFS), New Hampshire proposes to conduct wildland fire training. The fire training includes the use of small (1-5 acre, not to exceed 20 acres) prescribed fires in grassland and woodland on the installation. Training sites would be selected by the installation Natural Resources Department to ensure continuity with goals established in the 2000 Integrated Natural Resources Management Plan, protect breeding birds from unintentional take and protect any sensitive habitats and archeological sites from disturbance. The training could take place in any location on the installation during any season with the exception of jurisdictional wetlands or archeological sites. The training is designed to give troops and DoD civilians the knowledge necessary to control wildfires.

Potential impacts to the natural and human environment associated with Wildland Fire Training at NBAFS are assessed in the attached Environmental Assessment (EA) entitled "Environmental Assessment For Wildland Fire Training at New Boston Air Force Station, New Hampshire". The EA was prepared in accordance with specific tasks and procedures of the USAF Environmental Impact Analysis Process (EIAP; Air Force Instruction 32-7061), as it applies to the National Environmental Policy Act of 1969 (Public Law 91-190, 42 U.S.C. §§4321-4347).

The EA evaluates the environmental consequences of a proposed action (Wildland Fire Training), and the no-action alternative (i.e., allowing forest to mature). The assessment evaluates the potential for impacts to air quality, noise levels, topography, geology, soils, water resources, ecological resources (including threatened and endangered species and wetlands), cultural resources, land use, recreation, visual resources, socioeconomics, and health and safety. Based on a comparison of alternatives, the proposed action is preferred over the other alternatives.

The Environmental Assessment (EA) and Draft Finding of No Significant Impact (FONSI) were both made available to the affected public for a 15-day public comment period. The affected public was notified by advertisements placed in the state's largest newspaper. The EA and FONSI were made available by placing on file in the town libraries in Amherst, Mont Vernon and New Boston, New Hampshire.

On the basis of the assessments presented in the EA, the proposed action would not result in any significant impacts to the environment.

Based upon these reviews and the assessments detailed in the EA, it has been determined that the proposed action would not have a significant effect on the human environment. Therefore, an Environmental Impact Statement will not be required nor prepared for Wildland Fire Training at New Boston Air Force Station, New Hampshire.

Date



STEPHEN F. SOVAIKO, Lt Col, USAF
Commander

17 May 03

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**ENVIRONMENTAL ASSESSMENT
FOR
WILDLAND FIRE TRAINING
AT NEW BOSTON AIR FORCE STATION, NEW HAMPSHIRE**



Prepared by

**23 SOPS/MAFCVN
U.S. Department of the Air Force
New Boston Air Force Station
New Hampshire**

April 2003

TABLES	iii
FIGURES	iii
ACRONYMS AND ABBREVIATIONS	iv
UNITS OF MEASURE.....	v
ABSTRACT.....	1
1 PURPOSE AND NEED FOR THE PROPOSED ACTION.....	2
2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES	2
2.1 Proposed Action.....	2
2.2 Alternative to the Proposed Action.....	3
2.2.2 No-Action Alternative	3
3 AFFECTED ENVIRONMENT	4
3.1 Location, History, and Current Mission	4
3.2 Climate, Air Quality, and Noise	7
3.2.1 Climate.....	7
3.2.2 Air Quality	7
3.2.3 Noise	7
3.3 Topography, Geology, and Soils	8
3.4 Water Resources	9
3.5 Ecological Resources	9
3.6 Cultural Resources	11
3.7 Land Use, Recreation, and Visual Resources	11
3.8 Socioeconomics	12
4 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES	13
4.1 Environmental Consequences of the Proposed Action.....	13
4.1.1 Air Quality and Noise	13
4.1.2 Topography, Geology, and Soils	14
4.1.3 Water Resources	14
4.1.4 Ecological Resources.....	14
4.1.5 Cultural Resources.....	16
4.1.6 Land Use, Recreation, and Visual Resources	16
4.1.7 Socioeconomics	16
4.1.8 Health and Safety.....	17
4.2 Environmental Consequences of the No-Action Alternative.....	17
4.3 Adverse Effects that Cannot be Avoided if the Project Is Implemented	17
4.4 Irreversible and Irretrievable Commitment of Resources.....	18
4.5 Relationship between Short-Term Uses and Long-Term Productivity.....	18
4.6 Cumulative and Incremental Impacts	18
5 REFERENCES	20
6 LIST OF PREPARERS.....	23
Name	23
Education/Experience	23
Contribution	23
7 AGENCIES, ORGANIZATIONS, AND PERSONS CONTACTED.....	24
APPENDIX A LISTED AND RARE SPECIES ON NEW BOSTON AIR STATION	I
APPENDIX B Request for Environmental Impact Analysis (AF Form 813)	I

TABLES

1	Summary Comparison of Impacts Associated with the Proposed Action, Alternate Action, and No-Action Alternatives	6
A.1	Federally Listed, State Listed, and Rare Species of Plants and Animals Found on New Boston Air Station, New Hampshire	I
A.2	Species Listing Status and Ranking Codes Used by the Federal Government and the State of New Hampshire	II

FIGURES

1	Location of New Boston Air Station, New Hampshire	5
2	Station Boundaries, Roads, Facilities, and Natural Features on New Boston Air Station, New Hampshire	6

ACRONYMS AND ABBREVIATIONS

AFSCN	Air Force Satellite Control Network
ANL	Argonne National Laboratory
CFR	Code of Federal Regulations
CO	carbon monoxide
CTV	cable television
EA	environmental assessment
EIAP	environmental impact analysis process
EPA	Environmental Protection Agency
MSL	mean sea level
NAAQS	National Ambient Air Quality Standards
NASA	National Aeronautics and Space Administration
NATO	North Atlantic Treaty Organization
NBAFS	New Boston Air Station
NEPA	National Environmental Policy Act
NHDHR	New Hampshire Division of Historical Resources
NO ₂	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
O ₃	ozone
OSHA	Occupational Health and Safety Act
PAL	Public Archaeology Laboratory, Inc.
Pb	lead
PES	Parsons Engineering Sciences, Inc.
PM _{2.5}	particulate matter with an aerodynamic diameter of 2.5 µm
PM ₁₀	particulate matter with an aerodynamic diameter of 10 µm
SHPO	State Historic Preservation Officer
SO ₂	sulfur dioxide
SOPS	Space Operations Squadron
SAAQS	State of New Hampshire Ambient Air Quality Standards
USAF	United States Air Force
UXO	unexploded ordnance

UNITS OF MEASURE

cm	centimeter(s)
dB	decibel(s)
dBA	unit of weighted sound-pressure level
ft	foot (feet)
h	hour(s)
ha	hectare(s)
in.	inch(es)
km	kilometer(s)
km ²	square kilometer(s)
kV	kilovolt
L _{dn}	day-night weighted equivalent sound level
L _{eq}	equivalent steady sound level
m	meter(s)
m ²	square meter(s)
m ³	cubic meter(s)
mi	mile(s)
mi ²	square mile(s)
mm	millimeter(s)
μm	micrometer(s)
yd ³	cubic yard(s)

**ENVIRONMENTAL ASSESSMENT
FOR
WILDLAND FIRE TRAINING
AT NEW BOSTON AIR STATION, NEW HAMPSHIRE**

**prepared by
23 SOPS/MAFCVN
U.S. Department of the Air Force
New Boston Air Force Station
New Hampshire**

This Environmental Assessment (EA) was prepared in accordance with

- * The National Environmental Policy Act (NEPA)
- *The Council on Environmental Quality regulations for implementing NEPA
- *32 Code of Federal Regulations (CFR) Part 989, Environmental Impact Analysis Process (EIAP)
- *AFI 32-7060, Interagency and Intergovernmental Coordination for Environmental Planning; and
- *AFI 32-7061, The Environmental Impact Process

ABSTRACT

The proposed action evaluated in this environmental assessment (EA) is to conduct wildland fire training. The fire training includes the use of small (typically 1-5 acre, not to exceed 20 acres) prescribed fires in grassland and woodland on the installation. Training sites would be selected by the installation Natural Resources Department to ensure continuity with goals established in the 2000 Integrated Natural Resources Management Plan, protect breeding birds from unintentional take and protect any sensitive habitats and archeological sites from disturbance. The training could take place in any location on the installation during any season with the exception of eligible archeological sites. This EA evaluated the potential impacts to air quality, noise levels, topography, geology, soils, water resources, ecological resources, cultural resources, land use, recreation, visual resources, socioeconomics, and health and safety. On the basis of this assessment, it was determined that the proposed action would result in only minor to negligible localized, short-term, or temporary impacts to the environment as compared to the no-action alternative. The wildfire training would result in a negligible to minor incremental addition to impacts that have occurred from other activities. A long-term benefit to natural resources would result from increased availability of multiple forest age classes resulting from fire related disturbance at New Boston Air Force Station.

1 PURPOSE AND NEED FOR THE PROPOSED ACTION

The proposed action evaluated in this environmental assessment (EA) is to conduct wildland fire training. The fire training includes the use of small (typically 1-5 acre, not to exceed 20 acres) prescribed fires in grassland and woodland on the installation. Training sites would be selected by the installation Natural Resources Department to ensure continuity with goals established in the 2000 Integrated Natural Resources Management Plan, protect breeding birds from unintentional take and protect any sensitive habitats and archeological sites from disturbance. The training could take place in any location on the installation during any season with the exception of jurisdictional wetlands or archeological sites. This EA evaluates the environmental consequences of implementation of the proposed action. The no-action alternative (i.e., to not conduct training) was also assessed. This EA was prepared in accordance with specific tasks and procedures of the U.S. Air Force (USAF) Environmental Impact Analysis Process (EIAP), as it applies to the National Environmental Policy Act (NEPA) of 1969, 40 Code of Federal Regulations (CFR) Parts 1500-1508, as amended.

2 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

This section provides a brief description of the proposed action (Section 2.1), and the no-action alternative (Section 2.2.2).

2.1 Proposed Action

The proposed action evaluated in this EA is to conduct wildland fire training. The fire training includes the use of small (typically 1-5 acre, not to exceed 20 acres) prescribed fires in grassland and woodland on the installation. Training sites would be selected by the installation Natural Resources Department to ensure continuity with goals established in the 2000 Integrated Natural Resources Management Plan, protect breeding birds from unintentional take and protect any sensitive habitats and archeological sites from disturbance. The training could take place in any location on the installation during any season with the exception of jurisdictional wetlands or archeological sites. Training would be limited to no more than four occurrences per year.

Proposed training activities would include creation of small firebreaks with hand tools, development of hose-lays and use of pumps for water-handling, ignition and suppression of small prescribed fires to teach students control techniques. Prescribed fire would typically be

limited to less than one acre actively burning at any one time and approximately 5 acres (not to exceed 20 acres) during one day

2.2 Alternative to the Proposed Action

2.2.2 No-Action Alternative

The no action alternative would prevent USAF active duty personnel and DoD civilians from gaining hands-on fire training at New Boston Air Force Station. Personnel would be forced to gain experience on actual wildfires or would be forced to travel to other units for training.

3 AFFECTED ENVIRONMENT

This section presents a general description of NBAFS and the resources that could be affected by the proposed wildland fire training. The descriptive material is drawn mostly from various EAs and natural resources reports that pertain to the NBAFS (e.g., ANL 1990, 1997, 1999; PES 1995, 1996).

3.1 Location, History, and Current Mission

NBAFS is located in south-central New Hampshire about 19 km (12 mi) west of Manchester. The 1,144-ha (2,826-acre) site is located within the towns of New Boston, Amherst, and Mont Vernon in Hillsborough County (Figure 2).

As one of the worldwide network of satellite command and control stations of the Air Force Satellite Control Network (AFSCN), the current mission of NBAFS is to serve as a remote tracking station for military and communications satellites. The 23 Space Operations Squadron (SOPS) at NBAFS provides launch, operation, and on-orbit support for more than 100 military satellites, communication satellites, North Atlantic Treaty Organization (NATO) and other allied nation satellites, and for National Aeronautics and Space Administration (NASA) Space Shuttle missions.

From 1941 until 1956 the site (then known as the New Boston Bombing and Gunnery Range) was used as an air-to-ground bombing and strafing range. The USAF acquired rights to the site in 1957 for use as a satellite tracking station. In 1959, the 6594th Instrumentation Squadron was activated at NBAFS. Squadron activities began in 1960 with use of mobile radar units until the permanent facilities were constructed and in operation by 1964. The site was formerly under the jurisdiction of the USAF Systems Command, and moved under the USAF Space Command in 1987 (PES 1995). As mentioned, the satellite tracking mission is conducted from the Operations Area. The remainder of NBAFS supports military training exercises, recreation, and natural resource management (ANL 2000).

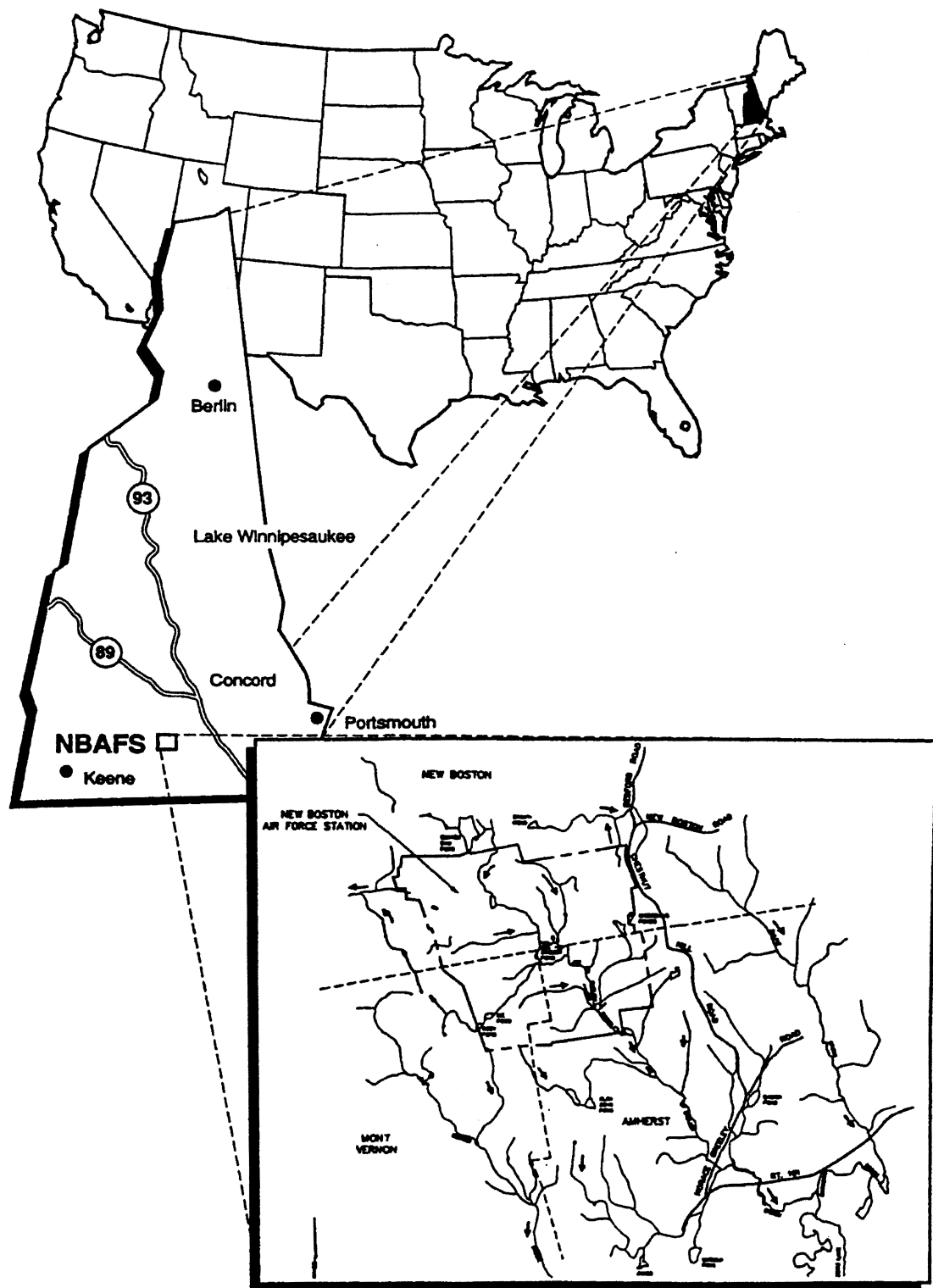


Figure 1 Location of New Boston Air Station, New Hampshire (Source: ENSR 1993)

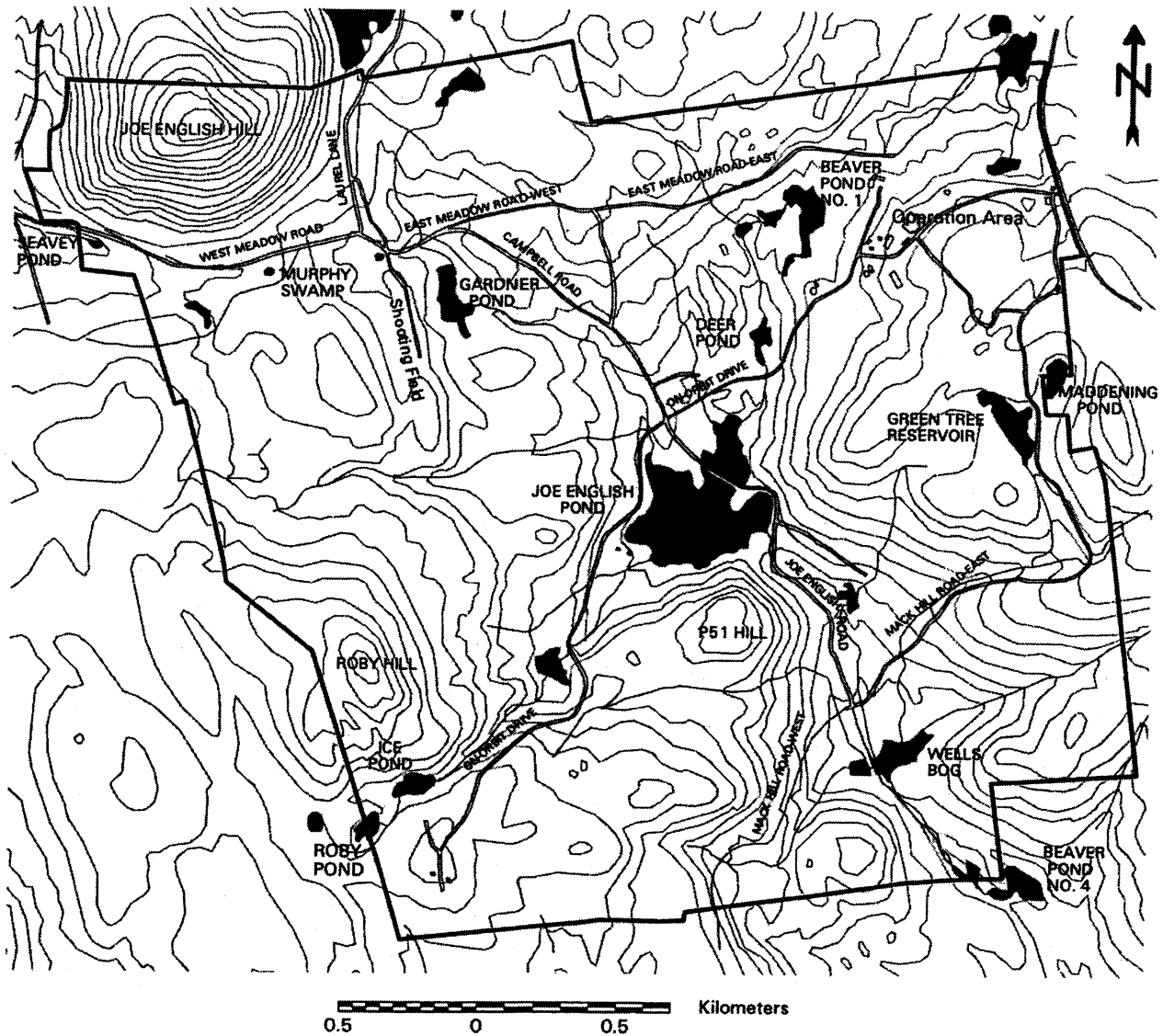


Figure 2 Station Boundaries, Roads, Facilities, and Natural Features on New Boston Air Station, New Hampshire (Source: ANL 1997)

3.2 Climate, Air Quality, and Noise

3.2.1 Climate

The region around the NBAFS is characterized by a humid continental climate. Precipitation is distributed throughout the year, with no particular wet or dry season. Coastal storms can be a serious weather hazard in southeastern New Hampshire, decreasing in importance northward (Ruffner 1985). Such storms generate very strong winds and heavy rain or snow. Storms of tropical origin affect or threaten New Hampshire about once every 2 to 3 years. Thunderstorms occur 15 to 30 times per year. Ice storms occur in the winter but are usually of short duration. However, a few widespread and prolonged ice storms have occurred. Based on the data for the 9,130 km² (3,530 mi²) area that includes the NBAFS, less than two tornadoes occur per year. The localized area effected by a tornado averages only 0.29 km² (0.11 mi²; Ramsdell and Andrews 1986) (ANL 2000).

3.2.2 Air Quality

The State of New Hampshire Ambient Air Quality Standards (SAAQS) are identical to the National Ambient Air Quality Standards (NAAQS) for six criteria air pollutants: sulfur oxides (as sulfur dioxide [SO₂]), particulate matter with aerodynamic diameters of $\leq 10 \mu\text{m}$ and equal to $2.5 \mu\text{m}$ (PM₁₀ and PM_{2.5} respectively), carbon monoxide (CO), ozone (O₃), nitrogen dioxide (NO₂), and lead (Pb) (Sanborn 1998). In 1996, New Hampshire discontinued Pb monitoring because Pb concentrations were well below the NAAQS and at the lowest levels of the detection limit (Argonne 2000). As of November 4, 2002, Hillsborough County (which includes NBAFS) was designated as an attainment area for all criteria pollutants, except ozone. New Boston AFS is located in two Ozone non-attainment areas, Boston-Lawrence-Worcester (E. MA), MA-NH Serious and Manchester NH (Marginal)(source <http://www.epa.gov/air/oaqps/greenbk/oindex.html>).

Permitted air pollution sources at NBAFS include two backup generators at the power plant (Building 157) and 15 boilers located in various buildings in the Operations Area.

3.2.3 Noise

Currently, no quantitative noise-limit regulations exist in New Hampshire (ANL 1999). The U.S. Environmental Protection Agency (EPA) guidelines recommend an L_{dn} (the day-night

weighted equivalent sound level) of 55 dBA¹, which is considered sufficient to protect the public from the effect of broad-band environmental noise in typically quiet outdoor and residential areas (EPA 1974). For protection against hearing loss in the general population from non-impulsive noise, the EPA guidelines recommend an L_{eq} ² of 70 dBA or less per day over a 40-year period.

No noise monitoring data are available from the area around the NBAFS site. However, the acoustic environment around the NBAFS site can be considered that of a rural location, having typical residual sound levels of approximately 30 to 35 dBA (Liebich and Cristoforo 1988).

3.3 Topography, Geology, and Soils

NBAFS is located within an area of hilly and mountainous terrain. The main physiographic features on NBAFS are Chestnut Hill in the northeastern section, Roby Hill in the southwestern section, and Joe English Hill in the northwestern section. Within the center of the station is Joe English Pond (Figure 3).

The bedrock geology underlying NBAFS consists of Pre-Quaternary metamorphic and igneous rocks. Generally, the bedrock is buried beneath glacial drift. Till is the dominant surficial deposit, composed of an unsorted to poorly sorted mixture of clay, silt, sand, pebble, cobbles, gravel, and boulders. However, swamp deposits and recent alluvium is also present. Glacial striations and drumlins (elongate or oval hills) are present throughout the area, providing evidence of the general north to south glacial movement. Chestnut Hill is one such glacial feature, a drumlin (PES 1995).

Over 90 percent of the soils on NBAFS were formed in glacial till; the remainder formed in outwash plains, kame terraces, or stream valleys. Soils formed in glacial till tend to be fine-textured and dense and contain many stones. Soils covering about one-half of NBAFS are classified as stony or very stony. The soils at NBAFS tend to be highly resistant to erosion if stabilized by vegetative cover. However, the soils have moderate to extreme erosion potential in

¹ dBA is a unit of weighted sound-pressure level, measured by the use of the metering characteristics and the "A" weighting specified in the *American Standard Specification for Sound Level Meters ANSI S1.4-1983 and Amendment S1.4A-1985* (Acoustical Society of America 1983, 1985).

² L_{eq} is the equivalent steady sound level that, if continuous during a specific time period, would contain the same total energy as the actual time-varying sound. For example, $L_{eq}(1-h)$ is the 1-hour equivalent sound level.

bare areas due to the fine texture of the soils and steep slopes present in portions of NBAFS. Activities that disturb or remove vegetation are likely to increase the erosion hazard, particularly on slopes (ENSR 1993).

3.4 Water Resources

Most of NBAFS is located within the Joe English Brook watershed. The station contains a number of open waters and stream segments (intermittent and perennial; Figure 3). Most surface water drains into Joe English Pond or Brook and eventually exits the installation in the South East corner.

The major aquifer system at NBAFS is in the bedrock. Groundwater levels at NBAFS range from 22 m (73 ft) below land surface to flowing artesian conditions near Joe English Pond. Six wells have been drilled into the groundwater at NBAFS for potable water (only five are currently used). Four other wells have been drilled for non-potable groundwater used for the satellite-tracking facilities (PES 1995).

No Federal Emergency Management Agency data are available for floodplains within NBAFS (PES 1995). However, major flood events (i.e., 100- to 500-year flood) would principally affect areas associated with Joe English Pond and Joe English Brook (PES 1995).

Permitted water pollution point sources include the station wastewater treatment plant and three storm water discharge points: two for the Building 141 parking lot and the third draining the sand borrow pit, salt/sand storage shed, and hazardous waste storage area. Discharges from the first two eventually drain into Bog Brook, which is located off-site, north of the Operations Area. The third eventually drains into Joe English Pond. Industrial and sanitary wastewater from the Operations Area is collected by a sewer system and routed to the station's wastewater treatment plant. The plant provides primary treatment and extended aeration treatment and disinfection. Discharges from the wastewater treatment plant are then discharged through a National Pollutant Discharge Elimination System (NPDES) permitted outfall to a hillside, where it eventually discharges into Beaver Pond No. 1.

3.5 Ecological Resources

The NBAFS has been identified as a Category I installation by both the New Hampshire Department of Fish and Game and the U.S. Fish and Wildlife Service. This classification

indicates that the NBAFS has suitable habitat for conserving and managing fish and wildlife. An Integrated Natural Resource Management Plan has been prepared to guide management of the natural resources of NBAFS using an ecosystem approach. The relatively high biodiversity supported on NBAFS is attributable to the presence of generally undisturbed lands throughout much of the site and to the types of low-impact activities that occur on the station (ANL 1997).

Three ecological surveys have been conducted to determine the habitats and biotic composition of NBAFS, wetland delineation (PES 1996), biodiversity survey (ANL 1997) and a bat survey (ANL 2002). The following discussion of ecological resources emphasizes those resources that may be affected by the proposed action.

NBAFS habitat is primarily mature deciduous, coniferous and mixed forests. A 1996 installation wide inventory determined Northern red oak (*Quercus rubra*) is the dominant deciduous species in the forest with 22 percent of the basal area. Red maple (*Acer rubrum*) was dominant in overall number of stems with 24 percent compared to 20.7 percent for red oak. Other common species include black birch (*Betula lenta*), white birch (*Betula papyrifera*), black oak (*Quercus velutina*) American beech (*Fagus grandifolia*). Eastern white pine (*Pinus strobus*) and Eastern hemlock (*Tsuga canadensis*) are the two dominant coniferous species found on the installation. Eastern white pine accounts for 24 percent of the basal area of all trees and 13 percent of stems, hemlock accounts for 16 percent of basal area and 14 percent of the stems.

Commonly encountered species include mourning dove, blue jay, hermit thrush, black-capped chickadee, American robin, rufous-sided towhee, dark-eyed junco, house finch, raccoon, coyote, Eastern chipmunk, woodchuck, red squirrel, red-backed vole, fisher, and white-tailed deer.

The threatened, endangered, and rare species known to occur on NBAFS are listed in Table A.1³ (Appendix A). A discussion of these species and the eight rare natural communities that occur at NBAFS is provided in ANL (1997) and summarized in ANL (1999). None of the rare natural communities will be used for wildfire training. Two state listed wildlife species have been documented in terrestrial habitats on the installation. The state listed (threatened) Eastern hognose snake (*Heterodon platyhinus*) has been well documented throughout the installation. The small-footed bat (*Myotis leibii*) was documented on the installation during a bat inventory conducted during summer 2002.

³ The species listing status and ranking codes for these species are presented in Table A.2 (Appendix A).

3.6 Cultural Resources

Archaeological investigations within the Merrimack River system have documented prehistoric sites dating from the Early Archaic period (8,000 to 5,500 B.C.), with very limited evidence for sites dating from the earlier Paleo-Indian period (10,500 to 8,000 B.C.). The streams and wetlands present at NBAFS and its high natural resource potential made it a suitable location for both temporary single-purpose foraging locations and possible multi-component campsites (i.e., sites containing evidence of several occupational periods). Two prehistoric sites and four isolated finds were recorded at NBAFS during subsurface testing (PAL 1993).

Twenty-eight historic sites occur on NBAFS (22 rural homesteads, 3 industrial complexes, and 3 civic sites [road, school, and trash dump]; Watford 1988; PAL 1993). These sites are distributed widely throughout NBAFS; although, 12 are clustered along the roads at the base of Joe English Hill. Twenty-six of these sites have been recommended as potentially eligible for listing on the *National Register of Historic Places* (PAL 1993) because of their potential to contain information important to the history of the area (Criterion D, as identified in 36 CFR 60.4). Further evaluation is required before a formal eligibility determination can be made (ANL 1999).

The State Historic Preservation Officer (SHPO) within the New Hampshire Division of Historical Resources (NHDHR) has indicated that seven buildings within the Operations Area may contribute to a historic district that is potentially eligible for listing on the *National Register of Historic Places* (Muller 1998)

Past activities at NBAFS have resulted in some impacts to cultural resources. Evidence of looting, erosion, and other damaging activities has been reported at several of the sites potentially eligible for listing on the *National Register of Historic Places* (PAL 1993; Loflin and Grumet 1996). The specific causes of the damages and time that they occurred are not known. No cultural resources sites would be used for wildfire training.

3.7 Land Use, Recreation, and Visual Resources

Facilities that support the satellite-tracking operations at NBAFS occupy about 17.7 ha (44 acres) of the 1,144 ha (2,826 acre) site (ANL 1997). Over the years, NBAFS has been restoring the remainder of the land to a natural state, while maintaining a proper balance between

natural resource enhancements and recreational and military training use of the station. Facilities located within the Operations Area include three enclosed satellite dish antennae, satellite-control buildings, and satellite-tracking and communications buildings. Support facilities include maintenance and administration buildings, a fire station, and storage facilities. Enlisted housing dormitories and several home structures are also present. The unimproved portions of NBAFS are not used to actively support mission operations (ANL 1999).

Recreational use of NBAFS is restricted primarily to active and retired military staff and their families and certain members of the public. Numerous active and passive outdoor recreational opportunities are available at NBAFS, including nature watching, fishing, swimming, camping, hiking, rock climbing, hunting, archery, boating, cross-country skiing, ice fishing, ice skating, sledding, and snowmobiling (ANL 1990).

The land immediately surrounding NBAFS is heavily wooded, representing some of the least developed and most rural portions of New Boston, Amherst, and Mont Vernon. However, the primary land use designated for the area is low-density residential use (PES 1995). Low-density, single-family homes on parcels typically over one acre; undeveloped lands; and several active farms (particularly along Chestnut Hill Road and Joe English Road) occur in the immediate vicinity of NBAFS. A computer software company is located opposite the main entrance to the station (ANL 1999).

Because of the limited land area required to support satellite-tracking operations, most of NBAFS provides a natural setting (e.g., the forests, hills, wetlands, and ponds). Visual resources are therefore rated as excellent, with scenic vistas evident from the station's higher elevations.

3.8 Socioeconomics

About 150 people are employed by NBAFS (15 military and the remainder civilian or civilian contract employees; PES 1995). Although rural in character, the three communities that surround NBAFS have experienced population growth because of their location within one of the most rapidly expanding areas of New England. To accommodate this growth, residential development is expected to continue in the neighborhoods surrounding NBAFS. The communities that surround NBAFS represent three of the most affluent communities of the state (all three are ranked in the top 25 of 234 communities in terms of median household income; PES 1995).

4 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION AND ALTERNATIVES

4.1 Environmental Consequences of the Proposed Action

Potential impacts from the proposed alternative that were evaluated in this EA include: (1) air quality impacts; including noise increases; (2) disturbance of land, streams, and wetlands from, wildfire training; (3) land use alterations and limitations; (4) habitat modification; and (5) damage to subsurface archaeological resources. Instructors and students would have to comply with all Federal, State, and local regulations pertaining to the environment (e.g., air, noise, solid wastes, water;). Adherence to these regulations would mitigate the potential for adverse impacts. Nevertheless, some environmental impacts would be unavoidable. The following sections discuss these potential environmental impacts and their significance.

4.1.1 Air Quality and Noise

Localized, short-term air quality impacts that could occur during wildfire training include the generation of fugitive dust, smoke and exhaust emissions. Prescribed fire activities would generate several air pollutants, typical emissions including PM10 of approximately 51 pounds per acre, pm 2.5 of 44 pounds per acre and CO of 497 pounds per acre burned. The potential impacts on ambient air quality in the vicinity of the NBAFS site would be minor and of short duration. No violations of applicable federal and state ambient air quality standards are expected.

General conformity under the Clean Air Act, Section 176 has been evaluated for the project described in this Environmental Assessment according to the requirements of 40 CFR 93, Subpart B. The requirements of this rule are not applicable to this action because the action is an exempt action under 40 CFR 93.153(c).

Noise impacts would occur from the use of machinery and vehicles. Work would occur mostly during weekday daytime hours, thus much of the equipment noise would be masked by background noises. Noise impacts associated with project activities would be minor and of short duration. Mitigating measures include ensuring work is scheduled during normal weekday work hours and ensuring the equipment noise controls are functional.

4.1.2 Topography, Geology, and Soils

Erosion would be negligible due the short-term exposure of open soils due fire-killed vegetation. Vegetation would be expected to reestablish quickly after fire training naturally. Steep slopes that may be more susceptible to erosion would not be used for fire-line construction training.

4.1.3 Water Resources

Localized minor to negligible increases in turbidity and sedimentation of surface waters in the wildfire training vicinity could occur. The major source for these impacts would be runoff from exposed soil, particularly during inclement weather, erosion control practices required for fire control lines and seasonal timing would mitigate any potentially adverse impacts. No long-term degradation in water resources is expected to result from the implementation of the proposed action.

The project would not be expected to affect groundwater resources (e.g., change the depth to groundwater, alter groundwater flow direction, affect groundwater recharge, or impact groundwater quality).

4.1.4 Ecological Resources

Impacts to ecological resources would be limited primarily to the immediate wildfire training area. Dust and other particulates and noise associated with the project, which could affect adjacent vegetation, would be produced over a short period of time and would be confined to a narrow corridor near active burning and training.

4.1.4.1 Vegetation

Vegetation communities would be modified by the proposed wildfire training. Some mature trees would be killed from heat generated by fire. Forest regeneration would be expected to develop during the following growing season from root suckers, coppice and by natural seeding. Species composition would not be expected to change. Wildfire training would be beneficial in field habitat because of nutrient release and killing of invading woody vegetation.

4.1.4.2 Fish and Wildlife

The proposed wildland fire training would have a positive impact on wildlife that utilizes under-story regeneration and small forest openings. Examples of these species include ruffed grouse, white-tailed deer, moose, rufous sided towhee and several bat species. Prescribed fire practices that create small forest openings may foster the development of suitable bat roosting and foraging habitat. Bat roost trees would be protected during wildfire training by ensuring large dead and damaged trees are preserved and additional mature trees are available for future roost trees. The greatest bat activity occurs along edges between intact forest and cut areas (BCI 2001).

Wildlife in the immediate wildfire training would be disturbed during the project by noise, smoke and visual disturbances from equipment, and personnel. These disturbances could cause short distance movements of wildlife, scare birds off their nests, or otherwise disrupt normal wildlife activities. However, because of the temporary and localized nature of these disturbances, their impacts are expected to be negligible.

Rare wildlife species and neotropical migrant bird species (afforded protection under the Migratory Bird Treaty Act) are distributed widely across the station and could occur in the wildfire training area (ANL 1999). Several rare and state listed species occur in terrestrial habitats throughout the installation including whip-poor-will, Eastern pipistrelle, Blanding's turtle, northern leopard frog. Individuals of these species in the immediate project area could be disturbed during the project. Any impacts that would occur would be minor, and would not jeopardize the survival of these species at NBAFS. Wildland fire training areas would be scouted for presence of these species before conducting any prescribed burn. Unintentional take of migratory birds due to military readiness (wildfire training) would be exempt from requirements of the Migratory Bird Treaty Act

Impacts to aquatic and wetland habitats and biota are expected to be temporary, minor, and indirect. No direct impacts (e.g., dredge or fill activities) to jurisdictional wetlands would occur.

4.1.4.3 Threatened and Endangered Species

No known federally or listed plant species or wildlife species are known to occur in any of the proposed wildfire training areas. Two state listed wildlife species have been identified on the installation in terrestrial habitats. The small footed bat (*Myotis leibii*), state listed endangered

and E. hognose snake (*Heterodon platirhinos*), state listed threatened were identified near Meadow Road during 2002.

Wildfire training is not expected to have a negative effect on either species due to seasonal timing and protection of areas for bats. In summer they appear to roost beneath rocks and in rock crevices in cliff faces or talus slopes(BCI 2001). Suitable roosting areas are available on the talus face of Joe English in an area not suitable for training. Small-footed bats would be most vulnerable to losses during the maternity season, nursing is complete by the second week in August(BCI 2001). Wildfire training will not be allowed near potential roost sited during the maternity season.

E. hognose snake could be affected by wildfire training in the event a snake was caught in active fire. All personnel would be briefed on the snakes appearance and asked to ensure avoidance. Individual snakes would be expected to move away from training activities.

4.1.5 Cultural Resources

The proposed wildfire training would not impact known cultural resources. Nevertheless, if cultural resource materials were unexpectedly encountered during training, operations would cease in the immediate area of the discovery until permission to resume work is given by the Natural Resources Planner.

4.1.6 Land Use, Recreation, and Visual Resources

The proposed project would result in a localized minor short-term loss followed by a long-term minor net gain in natural resources. This would not conflict with any plans or goals for natural resource management at NBAFS. The training would have no effects on land use in the area surrounding NBAFS.

4.1.7 Socioeconomics

The proposed action would require about 200 man-hours of labor each year. All activities would be confined to NBAFS. The nature and duration of the proposed training would not cause any significant adverse socioeconomic impacts to the local population, labor force, or economy. Because training would involve the current work force augmented by instructors from other agencies, impacts on the capacities of public services (e.g., schools, police, fire protection)

would not occur. The project would provide negligible employment benefits and associated increase in cash flow to the local economy.

Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" (February 11, 1994), requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations. No environmental justice impacts would be expected to either minority or low-income populations, since the proposed project would have no impact on the population immediately surrounding NBAFS.

4.1.8 Health and Safety

Health and safety issues related to the project routinely center on the potential or perceived effects from exposure hazardous materials or equipment related injuries. All trainees would be expected to follow all safety related USAF regulations.

4.2 Environmental Consequences of the No-Action Alternative

Under the no-action alternative, wildfire training would not occur. Taking no action would be equivalent to maintaining the existing environment. The impacts associated with the wildland fire training described in Section 4.1 (proposed action) would not occur. NBAFS would continue to have few personnel trained in fire management.

4.3 Adverse Effects that Cannot be Avoided if the Project Is Implemented

Implementation of the proposed alternative (Wildfire Training) should not result in any long-term adverse environmental impacts.

Although no significant air quality impacts are anticipated if the project is implemented, fugitive dust and engine exhaust and smoke emissions would be released during training activities. All air quality impacts would be short-lived and limited to the immediate training surroundings.

Despite the implementation of control measures, some unavoidable increases in soil erosion could result from project activities, especially during heavy rains. Turbidity and suspended solids in nearby surface water bodies could temporarily increase.

The potential would exist, albeit small, for serious injuries or fatalities to workers during the project.

4.4 Irreversible and Irretrievable Commitment of Resources

Resources that would be committed irreversibly or irretrievably from wildfire training would include materials that could not be recovered or recycled and materials or resources that would be consumed or reduced to irrecoverable forms. Use of fuel, oil, and other materials during training execution would constitute an irreversible and irretrievable commitment of those resources.

4.5 Relationship between Short-Term Uses and Long-Term Productivity

This section evaluates the effect of the proposed short-term use of the environment for the wildfire training on the long-term productivity of this same land and its resources. Wildfire training will provide higher quality habitat for many wildlife species than the current habitat condition and provide necessary training for DoD personnel. Most adverse impacts to the environment would be temporary (e.g. increased noise).

4.6 Cumulative and Incremental Impacts

Cumulative impacts are those impacts to the environment that result from the incremental effect of the proposed project when added to other past, present, and reasonably foreseeable future actions, regardless of what agency or person undertakes such actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (ANL 2000). No adverse cumulative effects are anticipated for either the proposed or alternative action.

The potential impact on ambient air quality from emissions (e.g., fugitive dust, smoke and engine exhaust emissions) would be a negligible short-term increase in emissions occurring from other activities at NBAFS and within Hillsborough County. However, emissions associated with the proposed action would be mostly confined to the immediate project area since most

emissions would be released near ground level. Emission rates would be low, so potential impacts on ambient air quality would be minor. Under the proposed action, some equipment noise could be detectable. However, these activities would occur infrequently, so cumulative noise impacts would be localized and temporary in nature.

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6 LIST OF PREPARERS

<u>Name</u>	<u>Education/Experience</u>	<u>Contribution</u>
Stephen Najjar	MS Natural Resources 7 Years Natural Resources Management	Responsible for all phases of EA preparation

7 AGENCIES, ORGANIZATIONS, AND PERSONS CONTACTED

Candace Hunstiger, Capt, USAF
Staff Judge Advocate
50 SW/JA
608 Navstar Street Suite 18
Schriever Air Force Base, CO 8012

APPENDIX A LISTED AND RARE SPECIES ON NEW BOSTON AIR STATION

Table A.1 Federally Listed, State Listed, and Rare Species of Plants and Animals Found on New Boston Air Station, New Hampshire.^a

Common Name	Scientific Name	Federal Status	State Status	State Rank
<u>Plants</u>				
Fern-leaved false foxglove	<i>Aureolaria pedicularia</i> var <i>intercedens</i>	- ^b	LE	S1
<u>Moths</u>				
No common name	<i>Aphareta purpurea</i>	-	-	S2
Orange-spotted idia	<i>Idia diminuendis</i>	-	-	S2S4
<u>Butterflies and Skippers</u>				
Appalachian brown	<i>Satyrodes appalachia</i>	-	-	S1?
Delaware skipper	<i>Atrytone logan</i>	-	-	S3S4
Mulberry wing	<i>Poanes massasoit</i>	-	-	S1S3
Little glassywing	<i>Pompeius verna</i>	-	-	SU
<u>Reptiles</u>				
Blanding's turtle	<i>Emydoidea blandingii</i>	-	-	S3
Eastern hognose snake	<i>Heterodon platirhinos</i>	-	LT	S2
<u>Birds</u>				
Pied-billed grebe	<i>Podilymbus podiceps</i>	-	LE	S1B/ZN
American bittern	<i>Botaurus lentiginosus</i>	-	-	S3B
Osprey	<i>Pandion haliaetus</i>	-	LT	S2B/ZN
Bald eagle	<i>Haliaeetus leucocephalus</i>	LT	LE	S1
Northern harrier	<i>Circus cyaneus</i>	-	LT	S2B
Cooper's hawk	<i>Accipiter cooperi</i>	-	LT	S2B/ZN
Whip-poor-will	<i>Caprimulgus vociferus</i>	-	-	S3B
<u>Mammals</u>				
Small footed bat	<i>Myotis leibii</i>		LE	S1
Eastern pipistrelle	<i>Pipistrellus subflavus</i>			S1N/SUB

^a Federal and state listing status codes and state ranks are defined in Table A.2 (Appendix A). State ranks do not confer any official or legal status to a species. These ranks are assigned by the New Hampshire Natural Heritage Inventory to provide information on the population status of species within the state.

^b A dash (-) indicates that the status is not applicable to that species. A question mark (?) indicates that the status shown is expected, but not known with certainty.

Source: ANL (1997), modified Jan 03.

Table A.2 Species Listing Status and Ranking Codes Used by the Federal Government and the State of New Hampshire.

Federal Listing Status Codes¹

- | | |
|------|---|
| LE | Listed as Endangered Species in the List of Endangered and Threatened Wildlife and Plants under the provisions of the Endangered Species Act. Defined as any species which is in danger of extinction throughout all or a significant portion of its range. |
| PE | Proposed for addition to the List of Endangered and Threatened Wildlife and Plants as Endangered Species. |
| LT | Listed as Threatened Species. Defined as any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. |
| PT | Proposed for listing as Threatened Species. |
| C | Candidate Species for addition to the list of Endangered and Threatened Wildlife and Plants. Taxa for which the USFWS currently has substantial information on hand to support the biological appropriateness of proposing to list the species as endangered or threatened. |
| LTSA | Threatened due to similarity of appearance. |
| NL | Not currently listed, nor currently being considered for addition to the List of Endangered and Threatened Wildlife and Plants. |

State Listing Status Codes²

- | | |
|----|--|
| LE | Endangered; those native species whose prospects for survival in New Hampshire are in immediate danger because of a loss or change in habitat, over-exploitation, predation, competition, disease, disturbance or contamination. Assistance is needed to ensure continued existence as a viable component of the State's wildlife community. |
| LT | Threatened; those species which may become endangered if conditions surrounding them begin, or continue to deteriorate. |
| SC | Special concern; those species which do not meet the definition of threatened or endangered species but, because of their beauty, commercial value, excessive collecting, or other factors, require monitoring or regulation. |

State Rank Codes³

- | | |
|----|---|
| S1 | Critically imperiled because of extreme rarity (5 or fewer occurrences, or very few remaining individuals), or because of some factor of its biology making it especially vulnerable to extinction. |
| S2 | Imperiled because of rarity (6 to 20 occurrences), or because of other factors demonstrably making it very vulnerable to extinction throughout its range. |

- S3 Either very rare and local throughout its range, or found locally (even abundantly at some of its locations) in a restricted range, or vulnerable to extinction throughout its range because of other factors; in the range of 21 to 100 occurrences.
- S4 Apparently secure, though it may be quite rare in parts of its range, especially at the periphery.
-

Table A.2 (continued).

State Rank Codes³ (continued)

- S5 Demonstrably secure, though it may be quite rare in parts of its range, especially at the periphery.
- SU Possibly in peril, but status uncertain; more information needed.
- SH Historically known; may be rediscovered.

State Rank Modifiers

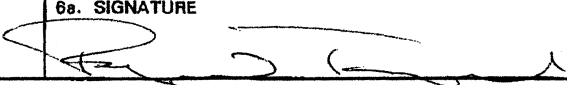
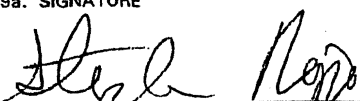
- A Accidental in the state; including species (usually birds or butterflies) recorded very infrequently, hundreds or thousands of miles outside their usual range.
- B Breeding status for a migratory species. Example: S1B, SZN - breeding occurrences for the species are ranked S1 (critically imperiled) in the state, nonbreeding occurrences are not ranked in the state.
- E An exotic established in the state; may be native in nearby regions.
- N Non-breeding status for a migratory species. Example: S1B, SZN - breeding occurrences for the species are ranked S1 (critically imperiled) in the state, non-breeding occurrences are not ranked in the state.
- Z Ranking not applicable.
- ? Ranking suspected, but uncertain.
-

¹List maintained by the U.S. Fish and Wildlife Service.

²List maintained by the New Hampshire Department of Fish and Game

³ State species ranking codes do not confer any official or legal status to a species. These ranks are developed by the New Hampshire Natural Heritage Inventory to provide information on the population status of species within the state.

APPENDIX B Request for Environmental Impact Analysis (AF Form 813)

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS		Report Control Symbol RCS:	
INSTRUCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).			
SECTION I - PROPONENT INFORMATION			
1. TO (Environmental Planning Function) MAFCVN		2. FROM (Proponent organization and functional address symbol) MAFCVN	
		2a. TELEPHONE NO. 2426	
3. TITLE OF PROPOSED ACTION Conduct Wildfire Training			
4. PURPOSE AND NEED FOR ACTION (Identify decision to be made and need date) Wildfire training is needed to ensure DoD personnel are capable of managing an uncontrolled fire at NBAFS. The decision to be made is whether to conduct wildfire training through the use of prescribed fire.			
5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action.) Proposed action: Wildfire training would be conducted up to four times per year by using prescribed fire. Training would consist of building fireline and implementing prescribed fires ranging from 1-15 acres. Alternative would be No Action.			
6. PROPONENT APPROVAL (Name and Grade) Rymond Trampach		6a. SIGNATURE 	
		6b. DATE 24 Mar 02	
SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY. (Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U = unknown effect)		+ 0 - U	
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)		X	
8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)		X	
9. WATER RESOURCES (Quality, quantity, source, etc.)		X	
10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)		X	
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)		X B	
12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)		X	
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)		X	
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)		X	
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)		X	
16. OTHER (Potential impacts not addressed above.)			
SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION			
17. <input type="checkbox"/> PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) # _____ ; OR			
<input checked="" type="checkbox"/> PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.			
18. REMARKS			
19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade) Steph Najar GS-11		19a. SIGNATURE 	
		19b. DATE 24 MAR 02	